

172



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,494	07/06/2001	Michael Freed	NEXSI-01112US0	4136

28863 7590 09/29/2004
 SHUMAKER & SIEFFERT, P. A.
 8425 SEASONS PARKWAY
 SUITE 105
 ST. PAUL, MN 55125

EXAMINER

MOORTHY, ARAVIND K

ART UNIT	PAPER NUMBER
----------	--------------

2131

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,494

Applicant(s)

FREED ET AL.

Examiner

Aravind K Moorthy

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 1, 5 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) *
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-21 are pending in the application.
2. Claims 1-21 have been rejected.

Claim Objections

3. **Claims 1, 5 and 11 are objected to because of the following informalities: grammatical, typographical errors and misspelling.**

In claim 1, the word "one" is in plural form when it should be in singular form. In the first line of claim 5, the word "encryption" is repeated. The second word "encryption" should be "decryption". In claim 11, the word "for" has been misspelled as "fore".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-7, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Devine et al U.S. Patent No. 6,606,708 B1.

As to claim 1, Devine et al discloses a load balancing SSL acceleration device, comprising:

a processor, memory and communications interface [column 5, lines 37-53];

a TCP communications manager capable of interacting with a plurality of client devices and server devices simultaneously [column 8, lines 36-65];

a secure communications manager [column 6, lines 38-43];

an encryption and decryption engine instructing the processor to encrypt data from a secure communications session and direct it to the second communication session [column 8, lines 22-35]; and

a load balancing engine associating ones of the client devices with ones of the servers for a communications session based on calculated processing loads of each the server [column 8, lines 36-65].

As to claim 2, Devine et al discloses that the TCP communications manager provides an IP address of an enterprise to the communications manager [column 23 line 17 to column 24 line 14]. Devine et al discloses that each of the plurality of servers is associated with the enterprise [column 24, lines 44-65].

As to claim 3, Devine et al discloses that the secure communications manager negotiates a secure communications session with each of the plurality of client devices over an open network [column 13 line 60 to column 14 line 37].

As to claim 4, Devine et al discloses that the TCP communications manager negotiates a separate, open communications session with one of the plurality of servers associated with the enterprise for each secure communications session negotiated with a client device [column 13 line 60 to column 14 line 37].

As to claim 5, Devine et al discloses that the encryption and decryption engine decrypts packet data received on the communications interface via a secure communications session, decrypts application data in the packet data and maps the data to an appropriate TCP session [column 8 line 66 to column 9 line 23].

As to claim 6, Devine et al discloses that the appropriate TCP session is selected by the load-balancing engine [column 23 line 17 to column 24 line 14].

As to claim 7, Devine et al discloses that the TCP communications manager responds to TCP communications negotiations directly for the enterprise [column 24, lines 27-43].

As to claim 9, Devine et al discloses that the secure communications engine negotiates a secure communication session for each TCP communications session [column 13 line 60 to column 14 line 37].

As to claim 10, Devine et al discloses the secure communications manager responds to all secure communications with each client device [column 9, lines 42-59].

5. Claims 12-15 and 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Lincke et al U.S. Patent No. 6,397,259 B1.

As to claim 12, Lincke et al discloses a method for performing SSL acceleration of data communications between a plurality of customer devices attempting to communicate with an enterprise having a plurality of servers, comprising:

Art Unit: 2131

providing a device enabled for secure communication with customer devices and having an IP address associated with the enterprise [column 19, lines 35-50];

receiving communications directed to the enterprise in a secure protocol from the customer devices [column 11, lines 8-25];

decrypting data packets of the secure protocol to provide decrypted packet data [column 85 line 63 to column 86 line 20];

selecting at least one of the plurality of servers in the enterprise based on a load calculation including processing sessions of other servers in the enterprise and associating the selected server with a communications session from one [column 111, lines 11-39]; and

forwarding the decrypted packet data to the selected server of the enterprise [column 85 line 63 to column 86 line 20].

As to claim 13, Lincke et al discloses that the method further includes the steps of:

receiving application data from the selected server of the enterprise [column 83 line 60 to column 85 line 61];

encrypting the application data received from the selected server [column 83 line 60 to column 85 line 61]; and

forwarding encrypted application data to the customer device [column 83 line 60 to column 85 line 61].

As to claim 14, Lincke et al discloses that the step of receiving secure communications directed to the enterprise includes receiving communications having a destination IP address of the enterprise [column 108, lines 48-59].

As to claim 15, Lincke et al discloses negotiating the secure protocol session with the customer device by responding as the enterprise to the customer devices [column 11, lines 8-25].

As to claim 17, Lincke et al discloses that the step of forwarding comprises:

establishing an open communication session with the selected server
[column 85 line 63 to column 86 line 20], and

mapping the decrypted packet data to an open communications session
established with the selected server [column 85 line 63 to column 86 line 20].

As to claim 18, Lincke et al discloses that the open communications session is established via a secure network [column 11, lines 8-25].

As to claim 19, Lincke et al discloses that the step of receiving comprises:

receiving SSL encrypted data having a length greater than a TCP segment
carrying the data [column 82 line 50 to column 83 line 30]; and

wherein the step of decrypting comprises

buffering the SSL encrypted data in a memory buffer in the SSL
accelerator device, the buffer having a length equivalent to the block
cipher size necessary to perform the cipher [column 82 line 50 to column
83 line 30]; and

decrypting the buffered segment of the received SSL encrypted data to provide decrypted application data [column 82 line 50 to column 83 line 30].

As to claim 20, Lincke et al discloses that the step of authenticating the data on receipt of a final segment [column 83, lines 19-30].

As to claim 21, Lincke et al discloses that the step of generating an alert if the step of authenticating results in a failure [column 83, lines 19-30].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8 and 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Devine et al U.S. Patent No. 6,606,708 B1 as applied to claim 1 above, and further in view of Gelman et al U.S. Patent No. 6,415,329 B1.

As to claims 8 and 11, Devine et al does not teach that the secure communications manager changes a destination IP address for each packet to a server IP address for each session.

Gelman et al teaches a secure communications manager that changes a destination IP address for each packet to a server IP address for each session [column 10, lines 9-21].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Devine et al so that the proxy server would have

changed the destination IP address for each packet to one of the server IP addresses for each session.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Devine et al by the teaching of Gelman et al because the detrimental effects of latency and errors on TCP are avoided and link utilization is greatly increased. TCP/IP headers are replaced with a much shorter WLP header, leaving more bandwidth for data. In addition, TCP/IP data may be compressed so that fewer bytes need to be sent over the wireless segment, thus improving data transfer times. Encryption may also be used to protect data from eavesdropping. Finally, the system may be implemented without making any changes to the TCP/IP code on the gateway. No changes of any kind are required to the end users [column 5, lines 54-67].

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lincke et al U.S. Patent No. 6,397,259 B1 as applied to claim 12 above, and further in view of Gelman et al U.S. Patent No. 6,415,329 B1.

As to claim 16, Lincke et al does not teach that the step of forwarding comprises modifying the destination IP address of data packets from the enterprise IP to an IP for the selected server.

Gelman et al teaches a secure communications manager that changes a destination IP address for each packet to a selected server IP address for each session [column 10, lines 9-21].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lincke et al so that the proxy server would have

Art Unit: 2131

changed the destination IP address for each packet to one of the server IP addresses for each session.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Lincke et al by the teaching of Gelman et al because the detrimental effects of latency and errors on TCP are avoided and link utilization is greatly increased. TCP/IP headers are replaced with a much shorter WLP header, leaving more bandwidth for data. In addition, TCP/IP data may be compressed so that fewer bytes need to be sent over the wireless segment, thus improving data transfer times. Encryption may also be used to protect data from eavesdropping. Finally, the system may be implemented without making any changes to the TCP/IP code on the gateway. No changes of any kind are required to the end users [column 5, lines 54-67].

Art Unit: 2131


Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K Moorthy whose telephone number is 703-305-1373. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R Sheikh can be reached on 703-305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aravind K Moorthy
September 21, 2004


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100